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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/071,131	02/11/2002	Takashi Umemoto	020170	3535

38834 7590 09/20/2004

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EXAMINER

LAM, CATHY FONG FONG

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 09/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/071,131

Applicant(s)

UMEMOTO ET AL.

Examiner

Cathy Lam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 10-15 and 20-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5, 10-14 and 20-22 is/are allowed.
- 6) ☒ Claim(s) 15 and 23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

In view of the amendment and remarks filed on July 08, 2004, claims 15 and 23 are continued to be unpatentable as following:

Claim Rejections - 35 USC § 112

1. Claim 23 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 23 is structurally indefinite, applicant has not clearly distinguish between "the first ceramic layer", "the second ceramic layer", "second green sheet" and "green sheet". The phrase "a first ceramic layer of composite device, said composite device having.....the first ceramic layer and a second ceramic layer" is unclear.

Furthermore, it is unclear whether or not "said green sheet" is referring to "a second green sheet"? it is unclear how the second ceramic layer", "a second green sheet" and "said green sheet" are related? Clarification is required.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 15 is rejected under 35 U.S.C. 102(b) as being anticipated by Kanba et al (US 5294477).

Kanba discloses a circuit board comprised of a plurality of layers stacked together. The layers are constituted by a mixture of metal and an insulating ceramic composition. The layers are so constructed to have a functionally gradient structure so that the abundance ratio of the metal component to the insulating ceramic composition is changing in the direction of thickness (col 1 L 50-57, col 3 L 25-36 & Figs. 1, 2, & 5).

Figure 1 shows that the volume fraction of the metal component and the insulating ceramic composition is continuously changing in the direction of thickness of the layer (col 2 L 58-63).

3. Claim 23 is rejected under 35 U.S.C. 102(b) as being anticipated by Nakano et al (US 5476728).

Due to the invention is unclear, with respect to the prior art rejections below, the claims will be given the broadest possible interpretation in view of the specification.

Nakano teaches a composite multilayer structure comprised of a plurality of dielectric layer (121) next to a plurality of magnetic layers (131). Internal electrodes (125) and internal conductors (135) are formed within the dielectric layers (12) and the magnetic layers (131), respectively (Fig. 29).

The examiner takes the position that Nakano's structure is analogous to claim 23, in that the 1st ceramic layer and the 2nd ceramic layer resemble the dielectric layer and the magnetic layer (or vice versa). The internal electrode (125) or the internal conductor (135) resemble the intermediate layer between two second green sheet.

The magnetic layers (131) is made of magnetic material and a non-magnetic insulating material. The magnetic insulating material comprised of silicon oxide and boron oxide, etc. dielectric material. (col 2 L 5-18).

Response to Arguments

4. Applicant's arguments filed on July 8, 2004 have been fully considered but they are not persuasive. Applicant disagrees the art rejection and raises the following issue:

A. Kanba teaches a pre-ceramic layer for a laminate structure, it has no first and second green sheets.

In respond to the above issue:

A. Kanba clearly teaches a multilayer green sheets that are laminated together, and that the mixing ratio of the components is changed continuously (col 4 L 11-17 & Fig. 5).

Allowable Subject Matter

5. Claims 1-5, 10-14 and 20-22 are allowed.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cathy Lam whose telephone number is (571) 272-1538. The examiner can normally be reached on 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Cathy Lam
Primary Examiner
Art Unit 1775

September 10th 2004